To: Lewis, Brent[b1lewis@blm.gov]

Cc: Zillich, Cathleen[czillich@blm.gov]; Schmittdiel, Paula[Schmittdiel.Paula@epa.gov]; Way,

Steven[way.steven@epa.gov]; Wall, Dan[wall.dan@epa.gov]

From: Rob Runkel

Sent: Mon 4/28/2014 5:25:52 PM **Subject:** Re: This may be of interest

Hi All --

Just wanted to let you all know I'm at DIA and headed to do field work in N. California this week -- I'll likely be checking emails each night. Last week I started to tabulate the results thus far. The scenarios I've simulated are 60, 70, 80, 90, and 100% reductions in the Red & Bonita loads. Each scenario consists of 8 simulations w/ a variety of inputs -- so each scenario will have a 'best estimate' and a range of expected concentrations for each metal. I had hoped to get these results to you before leaving, but it will have to be early next week. I'm also planning on starting a new set of simulations next week, where I simulate the effects of the old treatment plan. Sounds like I should check in w/ all of you before starting these - as there may be some changes. Anyway, that's where things are at. thanks, Rob

p.s. I hadn't seen the SOW clause about notifying blm when the funds are 80% gone; I don't have my hours tallied but I'm sure that's the case. Can also update you on that next week.

Rob Runkel Research Hydrologist U.S. Geological Survey runkel@usgs.gov 303.541.3013 http://profile.usgs.gov/runkel

On Mon, 28 Apr 2014, Lewis, Brent wrote:

> AII

> I'm available this week to meet on OTEQ and mornings are always best for

- > me. The OTEQ SOW was intentionally written broadly so we could easily
- > accommodate new scenarios as they arise; hence the SOW states "*at a
- > minimum*" we'd assess the Red &Bonita and the previous WTP. Other than the
- > current budget, there's no upper boundary on the number of runs. As Dan
- > suggests, additional river distance past A72 is definitively warranted so
- > this may require a SOW modification that we need to discuss with Rob.

>

- > Given the comments regarding background, i.e., natural inputs, at the
- > commissioner meeting last week it appears it would need more assessment;
- > however, I agree with others that its not an immediate goal and may not be
- > necessary at all.

>

> As far as the involving CDPHE, I vote they can have their input during the

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> ARSG meetings.
>
>
> On Mon, Apr 28, 2014 at 8:29 AM, Zillich, Cathleen <czillich@blm.gov> wrote:
>> I am busy Tuesday 1 - 3, but you can have this discussion without me.
>> The Agreement that BLM has with USGS outlines two scenarios.(pasted
>> below). I do not know how it would change the funding if we were to ask
>> for different or more scenarios. Last communication with Rob was that he
>> would do two assumed reductions from Red&Bonita (was it 50% and 80%
>> reduction?), so already we are not doing exactly what is in SOW, so now is
>> a good time to make sure we are getting scenarios that help us the most.
>>
>> *A)
         **STATEMENT OF WORK TASKS AND DELIVERABLES*
>>
>>
>> The primary purpose of this IGO is to extend the calibrated model to site
>> A72 on the Animas River downstream of Silverton, and to conduct a
>> preliminary analysis of potential remedial action scenarios. Specific tas
>> ks include:
>>
>>
>> *
           February 2014. Compile all relevant low-flow data for Cement
>> Creek from Gladstone to A72.
>>
>>
>>
>> *
           February 2014-April 2014. Extend calibrated model from the
>> South Fork of Cement Creek to A72. Compile list of data gaps that potentia
>> IIy affect our ability to estimate post-remediation water quality.
>>
>>
>>
           April 2014-July 2014. Preliminary model simulations to estima
>> te post-remediation water quality. At a minimum, these simulations will
>> consider the following two scenarios: (1) placement of a bulkhead in the
>> tunnel draining the Red and Bonita mine; (2) treatment of all waters
>> upstream of Gladstone in a manner similar to that of the previously
>> operated treatment plant. Predictive simulations will consider the
>> uncertainty of the proposed remedial actions (e.g. consideration of leakage
>> from the Red and Bonita Bulkhead) and variability in chemical inputs from
>> contributing watersheds (e.g. diel variation in metal concentrations coming
>> from the Upper Animas watershed as measured at site A68).
>>
>>
>>
          July 2013. Present results to the Animas River Stakeholders
>> Group in Silverton CO. This will be a formal presentation of the model
>> and the two scenarios at a meeting. The deliverable will be a pdf file and
>> handouts covering the findings and recommendations. Hardcopies shall be
>> made available for up to 20 people.
>>
>> .
         Provide written notification to BLM when 80% of the project
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>> funds have been expended.
>>
>>
>> Kay Zillich
>> Tres Rios and San Juan AML
>> 15 Burnett Ct
>> Durango, CO
>> 970-385-1239
>>
>>
>> On Fri, Apr 25, 2014 at 9:47 AM, Schmittdiel, Paula <
>> Schmittdiel.Paula@epa.gov> wrote:
>>
>>> We should discuss. Its on my list to get a meeting/conference call set
>>> up ASAP to discuss what scenarios we might want Rob to run on the model.
>>> Unfortunately, my only day next week that I'm available would be Tuesday
>>> afternoon. I thought after we had put together our ideas on scenarios, the
>>> we would run them by ARSG.
>>>
>>>
>>>
>>> It might be good to include the State (CDPHE) in our discussion - what
>>> does everyone think? What do your schedules look like for Tuesday
>>> afternoon?
>>>
>>>
>>>
>>> Paula Schmittdiel
>>> Remedial Project Manager
>>>
>>> U.S. Environmental Protection Agency
>>>
>>> 1595 Wynkoop St.
>>>
>>> Denver, CO 80202
>>>
>>> Office: 303-312-6861
>>> Fax: 303-312-7151
>>>
>>> Cell: 720-951-0795
>>>
>>>
>>>
>>> *From:* Wall, Dan
>>> *Sent:* Thursday, April 24, 2014 5:54 AM
>>> *To:* Way, Steven; Schmittdiel, Paula; Brent Lewis (Brent_Lewis@blm.gov);
>>> Zillich, Cathleen
>>> *Subject:* This may be of interest
>>>
>>>
>>> Since the OTEC piece is up and calibrated, it may not be much of a
>>> stretch for USGS to go down this path *IF* background is needed.
>>>
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>>>
>>> Dan
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>
>
> --
> Brent Lewis
> BLM's Colorado State Office
> Abandoned Mine Land Program Lead
> 2850 Youngfield Street
> Lakewood, CO 80215
> ph: 303.239.3711
> email: b1lewis@blm.gov
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